

CLAIMS

1. A device for indicating clogging of the fuel filter of internal combustion engines, in particular diesel engines, the filter comprising an outer casing closed by a cover of amagnetic material, and a filter element
5 which, together with the disc to which it is connected, defines two chambers for fuel entry and exit respectively, characterised by comprising a pressure sensor means sensing the difference between the entry and exit fuel pressure and housed inside the filter casing, and a means for generating a signal proportional to said pressure difference which is not
10 mechanically connected to the pressure sensor means and is located outside the filter casing.
2. An indicator device as claimed in claim 1, characterised in that the pressure sensor means comprises:

an elastically deformable element which defines a variable volume inside
15 the fuel entry or exit chamber; a conduit which connects said volume to the other chamber; and a magnet which, associated with the flexible element, moves to follow its elongation or contraction.
3. An indicator device as claimed in claim 2, characterised in that said pressure sensor means is housed in the fuel entry chamber.
- 20 4. An indicator device as claimed in claim 2, characterised in that said elastically deformable element is fixed, by known means, to the filter cartridge connection disc.
5. An indicator device as claimed in claim 2, characterised in that said flexible element is a bellows.

6. An indicator device as claimed in claim 2, characterised in that said flexible element is a membrane.
7. An indicator device as claimed in claim 2, characterised in that said conduit is a through hole passing through the thickness of the filter cartridge connection disc, in correspondence with the flexible element.
8. An indicator device as claimed in claim 2, characterised in that said signal generating means comprise:
a Hall sensor sensitive to the magnetic field of the magnet of the pressure sensor means, and a processor for processing the voltage signal generated by the Hall sensor.
9. An indicator device as claimed in claim 7, characterised in that the signal generating means is positioned on the filter cover.